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Copper-Carbonate Seed Treatment
FOR
STINKING SMUT OF WHEAT

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COPPER-CARBONATE SEED TREATMENT FOR STINKING SMUT OF WHEAT

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Stinking smut of wheat causes millions of dollars' loss each year in reduced yields and in discounts at the market. Much of this loss can be prevented by treating the seed with copper-carbonate dust.

ADVANTAGES OF COPPER CARBONATE

(1) It is cheap.

(2) It is easy to apply.

(3) It does not injure the seed even when sown in dry soil.

(4) Treated seed can be stored without injury.

(5) Copper carbonate protects stored grain from weevils. Rats and mice prefer untreated stored grain.

DIRECTIONS FOR USE

Thoroughly clean the seed with a fanning mill to remove smut balls. Use 2 to 3 ounces of copper carbonate per bushel of wheat. The copper carbonate must be evenly spread over every kernel. This is best done by thoroughly mixing the grain and the dust in a tight commercial or homemade mixer. See following pages for sketches and descriptions of simple homemade mixers. If one of these is used, treat one bushel at a time, turning the crank at a moderate rate of speed for two minutes.

WARNING

(1) Copper is poisonous.

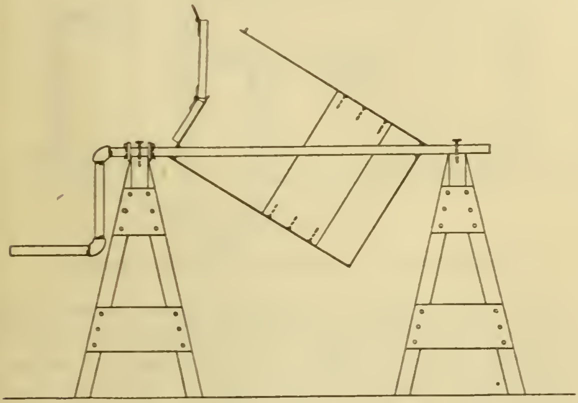
(2) Wear a mask over the nose and mouth when treating grain with copper-carbonate dust. The treating should be done in a well-ventilated place.

(3) Copper carbonate sifts into all working parts of the drill. After the drill has stood overnight, turn the feed shafts with a wrench to free the feed wheels. This avoids possible twisting of feed shafts and breaking of gears. Oil the gear bearings frequently.

(4) Do not use or sell treated wheat for food or feeding purposes.

OIL-DRUM MIXER

A 30-gallon oil drum is a convenient size. Cut out half of one head. Bolt to the top of the remaining half a board 1 inch thick, 6 inches wide, and the proper length to fit snugly against the inside rim of the barrel. Let 1 inch of cut edge of steel extend beyond the board. Cut a semicircular wooden head to fit the open half of drumhead and hinge this to 6-inch strip. If necessary, nail a strip of an old inner tube along the edge of the door to make it dust tight. Attach a hasp to hold the door tightly against the edge of the drum when closed.

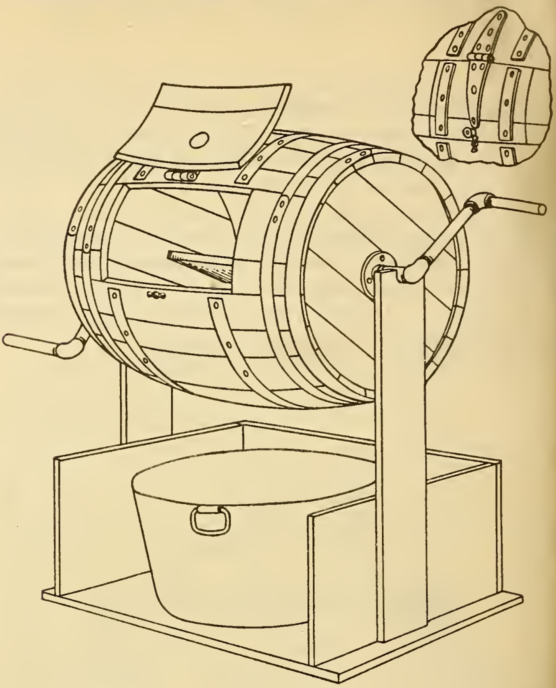


Designed by R. S. Kirby, Pennsylvania State College

The axle is made from ¾-inch pipe, 48 inches long, threaded at one end. It should pass diagonally through the barrel and extend about 8 inches beyond each end. It is best to have the drum and axle welded together, but the axle may be bolted to the drum.

Nail or screw a mixing board, 1 inch thick by 6 inches wide, across the full inside width of the barrel. Place the board edgewise and about two-thirds of the way back from the opening, as illustrated. Mount mixer on sawhorses.

BARREL MIXER



Designed by F. W. Oldenburg, University of Maryland

Use a tight 30-gallon or 40-gallon barrel made to hold liquids. Mark out a door about 8 inches wide by 14 inches long across two wide staves. Fasten hinge and straps to staves before sawing out the door. Saw the staves on a slope toward the middle of the barrel to get bevel edges on the door. Line bevel edges with rubber from an old inner tube to make the door dust tight.

Insert a mixing board 1 inch thick and 9 inches wide along the full inside length of the barrel. Nail it to ends of the barrel so that it lies edgewise against the inside of the barrel wall opposite the door, as illustrated.

On each end of the barrel screw or bolt a floor or railing flange threaded to hold 1-inch pipe. Insert a piece of 1-inch pipe 6 inches long in each flange to serve as an axle. Use 1-inch or ½-inch pipe for handles.

Mount barrel on boxlike stand, as shown, or on sawhorses.

For further information consult your county agent or write your State extension service or the United States Department of Agriculture.